

Work Order ID 65967

Friday, January 28, 2011 2:40:23 PM



AOG

Page 1

Item ID: D3391-023

Accept



Setup Start



Revision ID:

Item Name: Mid Tube Assembly

Stop



Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: *mf*

Date: 11-01-28

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3391

Rev H

100

0.00



Skidtubes

Skidtubes

0.00

Skidtubes

Memo

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open saddles and GHW holes to Ø0.375" except for fwd saddle hole of detail "J"

5-Remove .030" from Fwd indexing Ridge as per Dwg D3391

6-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

7-Deburr

8-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

9-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

10-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.297" (20 holes) as per Dwg D3391

DP

11-1-31

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 65967

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Item ID: D3391-023

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Setup Start



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Item Name: Mid Tube Assembly

Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

11-Open .375" holes to .438" ***do not open fwd saddle holes***

open Fwd Saddle holes to finished size

12-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

13- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allignment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

14- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

15- Locating from two fwd wearplate holes drill remaining 6 wearplate holes in D3391-021 using DT8937

16- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

17- counterbore two aft wearplate holes in D3391-021 as per dwg

18- Open 12 wearplate holes in D3391-021 to 0.297" dia.

19-Deburr and blow out all chips from inside tube

*N/A. cust want mid tube only
mf 11-01-28*

W/O:		WORK ORDER CHANGES					
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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

110

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/11/11

x2

120

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

Handwritten signature

11-2-1

2

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

2 D BE 11/02/01

W/O:		WORK ORDER CHANGES					
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Cust Item ID:

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Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

140

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Open float bag holes as per dwg
2-C'sink float bag holes as per dwg
3- Prepare tube for welding
4-Bond web in place as per Dwg D3391 & QSI 015.
Adhere for 12 hours)
A/R Sikaflex exp: 11-9-30
batch#: 1116040

150

0.00



QC

QC5- Inspect part completeness to step on W/O

Memo

0.00

Quality Control

160

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Weld crossbolt spacer as per dwg D3391 & QSI 004
2-grind weld flush

11-2-1

2 D BE 11/02/02

2 D BE 11/02/02

W/O:		WORK ORDER CHANGES					
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Work Order ID 65967

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Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

170

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Sulorlor

Quality Control

180

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Sulorlor

Quality Control

⑦

185

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

AND REALODINE AS PER PAR09-043

2 BR 11-02-3.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop



Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

190



Powdercoat

Powder Coating

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

M 11595 L.

Memo

START TIME: *11:15*

OVEN TEMPERATURE: *320°*

FINISH TIME: *11:45*

0.00

2

PL 11-02-3

200



QC

Quality Control

QC3- Inspect Part Finish

0.00

Memo

0.00

Subtotal

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 65967

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Item ID: D3391-023

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Setup Start



Revision ID:

Stop



Item Name: Mid Tube Assembly

Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

210

0.00



Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1- insert D3391-021 into D3391-23

2- insert T-pins into first and third fwd saddle holes

3- ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to 0.500" as per DSI 9364

4- remove T-pins and locate DT9415 from first and third crossbolt hole using T-pins and clekos

5- ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". Remove DT9415

6- deburr, re-alodine and blow out chips

7- press fit D3591-1 spacers using DT9416 starting from 0.500" side

220

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

N/A
cust want
mid tube
only.
me 11/01/28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

Work Order ID 65967

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Item ID: D3391-023

Accept



Setup Start



Revision ID:

Stop



Item Name: Mid Tube Assembly

Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

230

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

Install Inserts as per Dwg

=) M

4162 03

x2

0

240

0.00



QC5- Inspect part completeness to step on W/O

QC

Memo

0.00

Quality Control

Sub 1/3

+2

250

0.00



Identify as per dwg & Stock Location: _____

Packaging

Memo

0.00

Packaging

1 1/2 / 48

sl B3564-3

B66000

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O: 65967

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
11/02/03	230	INSTALLS => (8x) D3564-5/B65058 (wearplate) (8x) D3566-5/B64789 (Gasket)	JH	11/02/03	X2 X2		S 11/02/03
11/02/03	230	with => (24x) AN3C-4A/M116075 (bolts) (24x) NAS1149C0332R/M116025 (washers)	JH	11/02/03	X24 X21		S 11/02/03

Part No: D3391-023 PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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Work Order ID 65967

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Item ID: D3391-023

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Item Name: Mid Tube Assembly

Start Date: 1/28/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 2/2/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start



Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

260

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/02/04

MF
11-02-04

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

Friday, January 28, 2011 2:40:19 PM

Page 1

Work Order ID: 65967

Parent Item: D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 1/28/2011

Required Date: 2/2/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP A 05.10.20 New Issue KJ/EC
 IPP B 06.02.10 ECN773 dwg rev.D EC
 IPP C 07.03.20 rev F dwg EC
 IPP D 07.03.28 re-format EC
 IPP E 07.10.31 ecn 1053P EC
 IPP Rev:F ECN 1056 07-11-13 DD verified by: EC
 IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC
 IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC
 IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP
 Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D2500-1-100

Manufactured No

100

Each

116.0000

1

1



Skidtube Extrusion

Location

Loc Qty

Loc Code

LG

116

②

DP

11-1-3 1

37065

33

50251

83

D3391-021

Manufactured No

100

Each

0.0000

1

1



Fwd Tube Assembly

D3389-1

Manufactured No

140

Each

3.0000

1

1



Web

Location

Loc Qty

Loc Code

LG

3

②

DP

11-2-1

63343

1

64877

2

N
A. cut wants tube only not mid

W/O:		WORK ORDER CHANGES					
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Picklist Print

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Page 2

Work Order ID: 65967

Parent Item: D3391-023

Parent Item Name: Mid Tube Assembly

Start Date: 1/28/2011

Required Date: 2/2/2011

Start Qty: 1.00

Required Qty: 1.00

D3681-1 Manufactured No

160 Each 51.0000 5 5



Spacer

Location

Loc Qty

Loc Code

LG

51

56802

14

57656

12

63321

5

64620

20



BE 1/2/02
B 66025 *(x10)*

D3591-1 Manufactured No

210 Each 31.0000 2 2



Bushing

Location

Loc Qty

Loc Code

ST072

31

47121

2

57350

29



N
A. ME
11-02-04

AES4-1032-130 Purchased No

230 Each 907.0000 20 20



Insert

Location

Loc Qty

Loc Code

PKG11

480

114723

480

ST281

292

116049

292

ST282

96

110511

10

115911

86

ST381

39

114654

39



20 *11/02/03*

1115071 *220*

1 each x D3564-3 special big weld B66000 see page 8 picklist.

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Shop Packet Print

Page 2

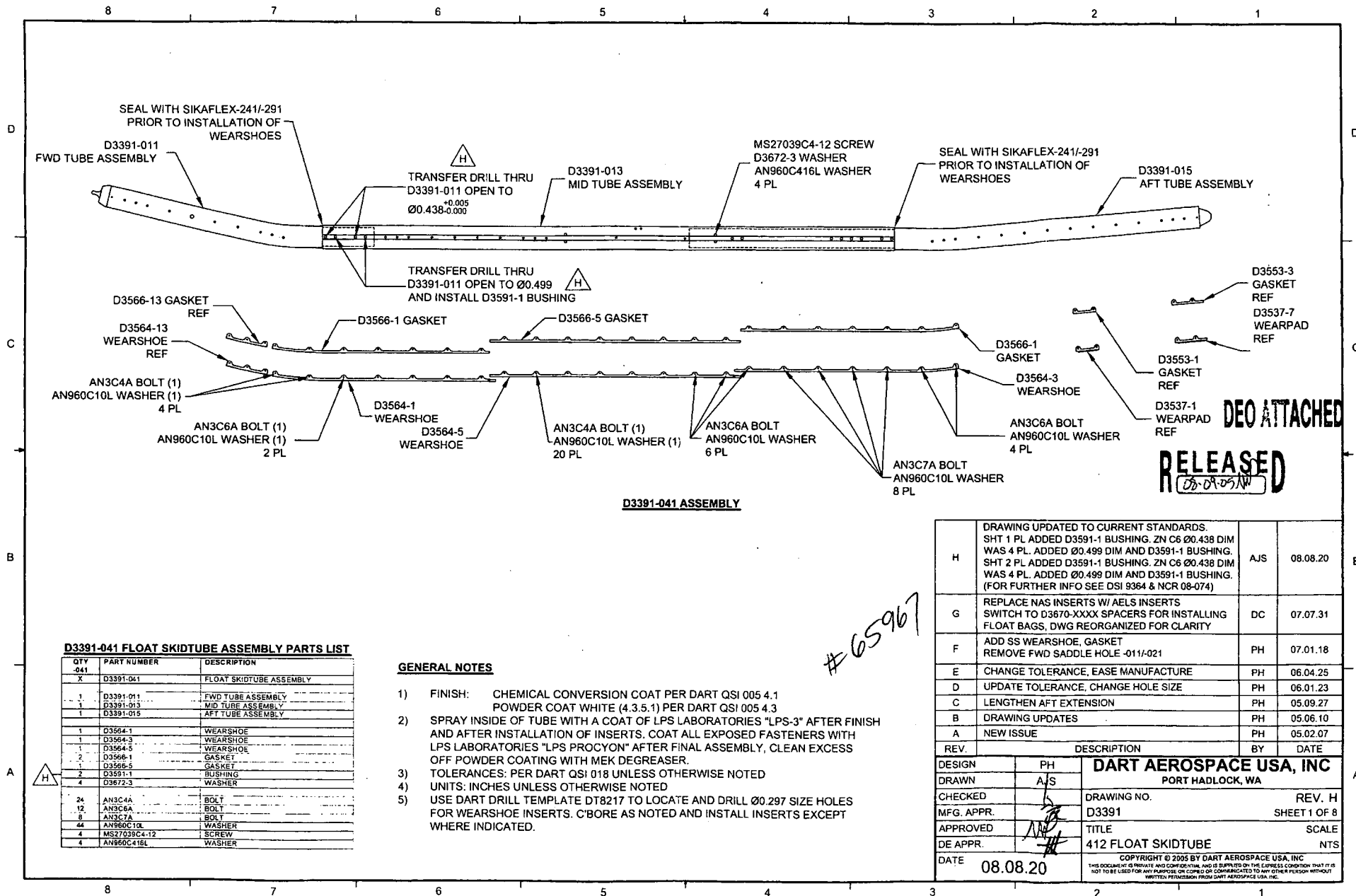
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D3391-041 FLOAT SKIDTUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
1	D3391-041	FLOAT SKIDTUBE ASSEMBLY
1	D3391-011	FWD TUBE ASSEMBLY
1	D3391-013	MID TUBE ASSEMBLY
1	D3391-015	AFT TUBE ASSEMBLY
1	D3564-1	WEARSHOE
1	D3564-3	WEARSHOE
2	D3564-5	WEARSHOE
1	D3566-1	GASKET
1	D3566-5	GASKET
2	D3591-1	BUSHING
4	D3672-3	WASHER
24	AN3C4A	BOLT
12	AN3C6A	BOLT
8	AN3C7A	BOLT
44	AN960C10L	WASHER
4	MS27039C4-12	SCREW
4	AN960C416L	WASHER

GENERAL NOTES

- 1) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 2) SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH
AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH
LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
OFF POWDER COATING WITH MEK DEGREASER.
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 SIZE HOLES
FOR WEARSHOE INSERTS. C'BORE AS NOTED AND INSTALL INSERTS EXCEPT
WHERE INDICATED.

H	DRAWING UPDATED TO CURRENT STANDARDS. SHT 1 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. SHT 2 PL ADDED D3591-1 BUSHING. ZN C6 Ø0.438 DIM WAS 4 PL. ADDED Ø0.499 DIM AND D3591-1 BUSHING. (FOR FURTHER INFO SEE DSI 9364 & NCR 08-074)	AJS	08.08.20
G	REPLACE NAS INSERTS W/ AELS INSERTS SWITCH TO D3670-XXXX SPACERS FOR INSTALLING FLOAT BAGS, DWG REORGANIZED FOR CLARITY	DC	07.07.31
F	ADD SS WEARSHOE, GASKET REMOVE FWD SADDLE HOLE -011/-021	PH	07.01.18
E	CHANGE TOLERANCE, EASE MANUFACTURE	PH	06.04.25
D	UPDATE TOLERANCE, CHANGE HOLE SIZE	PH	06.01.23
C	LENGTHEN AFT EXTENSION	PH	05.09.27
B	DRAWING UPDATES	PH	05.06.10
A	NEW ISSUE	PH	05.02.07
REV.	DESCRIPTION	BY	DATE
DESIGN	PH		
DRAWN	AJS		
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	08.08.20		

DART AEROSPACE USA, INC
PORT HADLOCK, WA

DRAWING NO. REV. H
D3391 SHEET 1 OF 8
TITLE SCALE
412 FLOAT SKIDTUBE NTS

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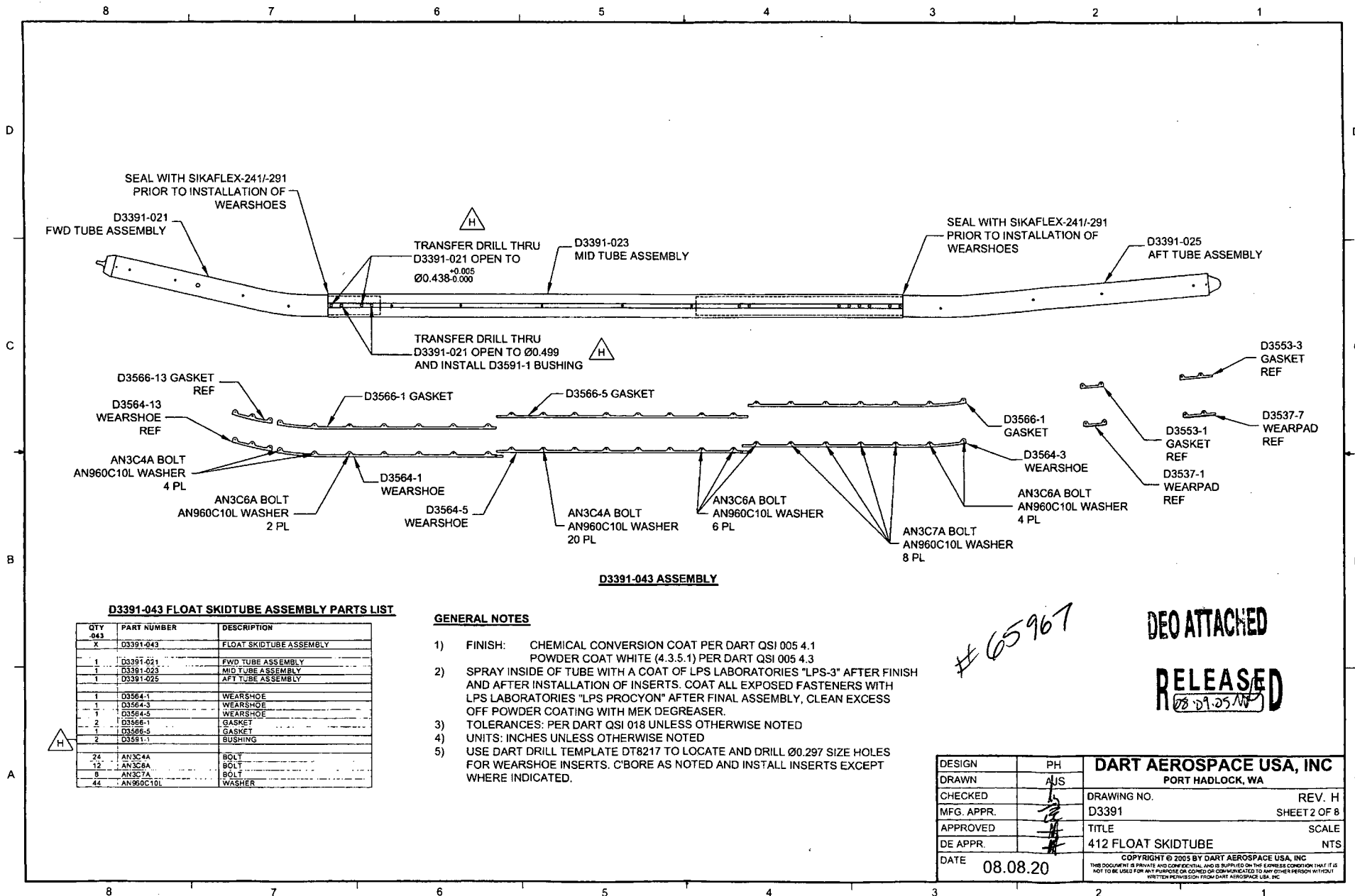
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



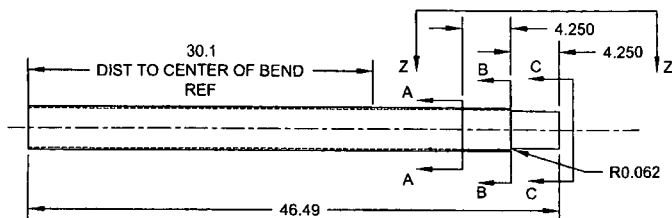
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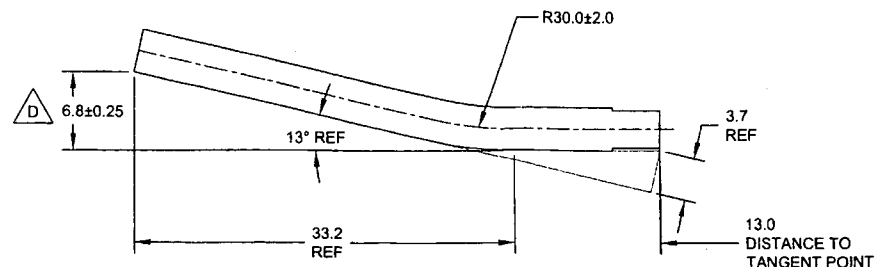
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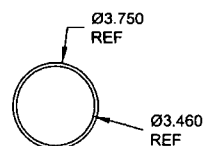
NOTE: Date & initial all entries



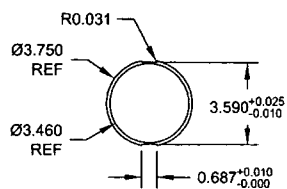
D3391-1 CUTTING DETAIL
(MAKE FROM D6013-047 SKIDTUBE MATERIAL)



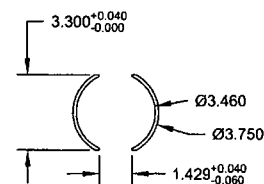
D3391-011/-021 BENDING DETAIL
(MAKE FROM D3391-1)



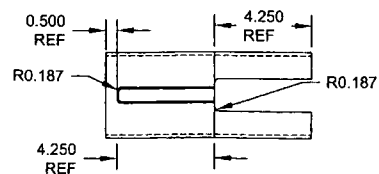
SECTION A-A
SCALE 2X



SECTION B-B
SCALE 2X



SECTION C-C
SCALE 2X



VIEW Z-Z
SCALE 2X

#05967

DEO ATTACHED
RELEASED
8-8-05

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AUS	PORT HADLOCK, WA	
CHECKED		DRAWING NO. D3391	REV. H
MFG. APPR.			SHEET 3 OF 8
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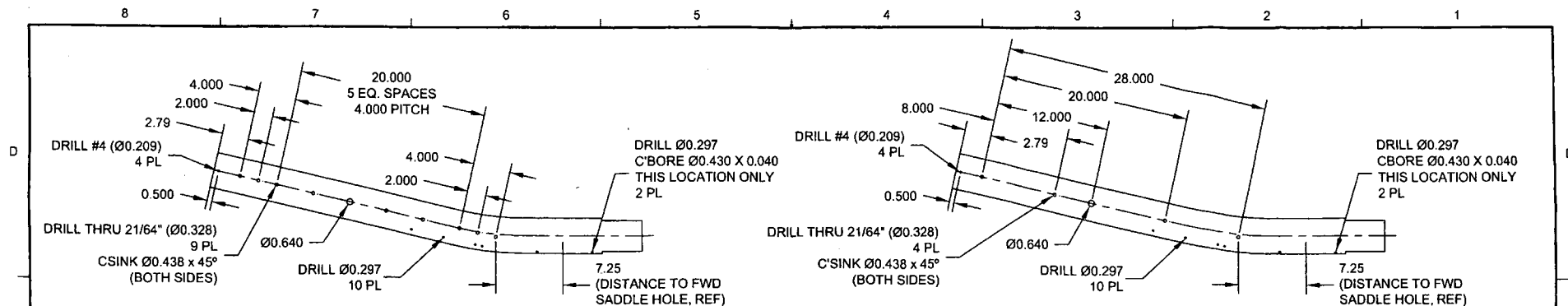
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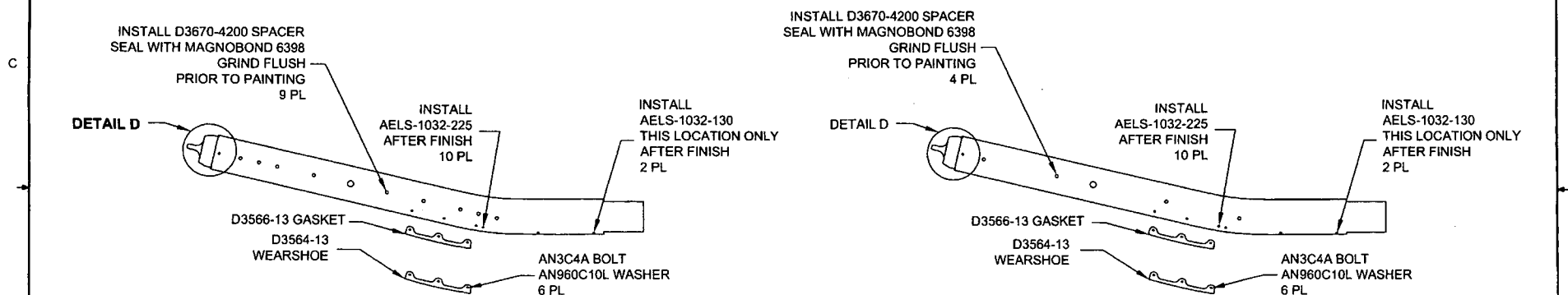
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D3391-011 DRILLING DETAIL

D3391-021 DRILLING DETAIL



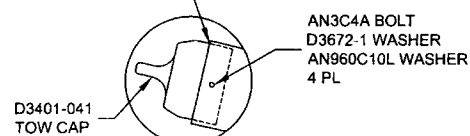
D3391-011 ASSEMBLY DETAIL

D3391-021 ASSEMBLY DETAIL

D3391-011/-021 FWD TUBE ASSEMBLY PARTS LIST

QTY - 011	QTY - 021	PART NUMBER	DESCRIPTION
X		D3391-011	FWD TUBE ASSEMBLY
	X	D3391-021	FWD TUBE ASSEMBLY
1	1	D6013-047	FWD TUBE
1	1	D3401-041	TOW CAP
1	1	D3564-13	WEARSHOE
1	1	D3566-13	GASKET
9	4	D3670-4200	SPACER
4	4	D3672-1	WASHER
10	10	AN3C4A	BOLT
10	10	AN960C10L	WASHER
2	2	AELS-1032-130	INSERT
10	10	AELS-1032-225	INSERT




SEAL WITH
SIKAFLEX-241/-291



DETAIL D
SCALE 2X

#65967

DEO ATTACHED
RELEASED
08-09-05 M

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MFG. APPR.		D3391	SHEET 4 OF 8
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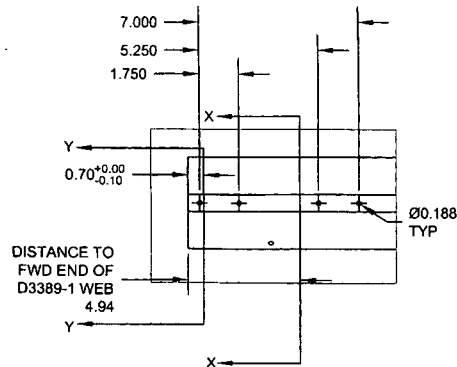
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

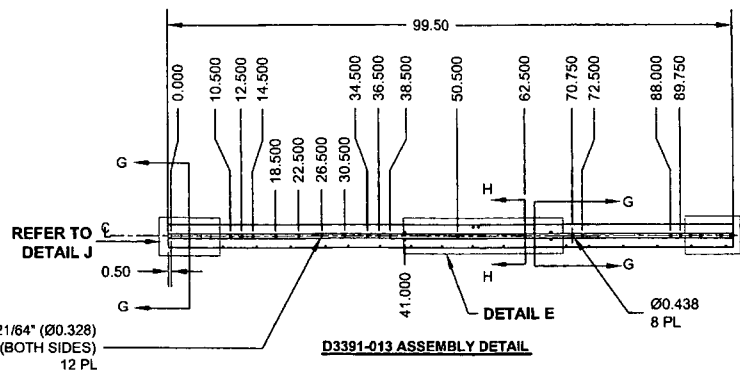
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



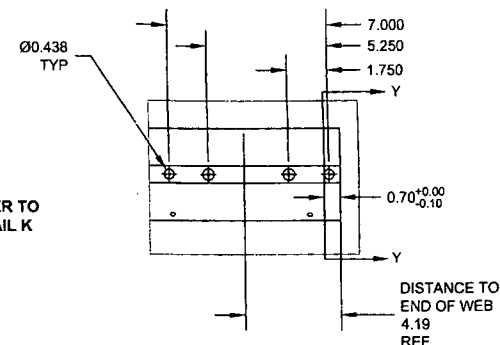
DETAIL J
SCALE 4X

DRILL THRU 21/64" (Ø0.328)
CSINK Ø0.438 X 45° (BOTH SIDES)
12 PL

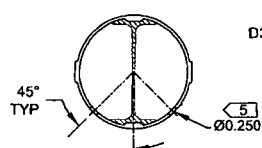


D3391-013 ASSEMBLY DETAIL

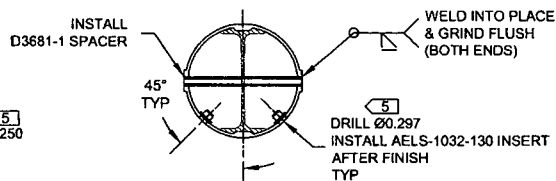
REFER TO
DETAIL K



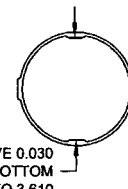
DETAIL K
SCALE 4X



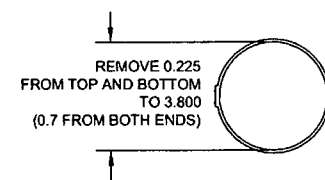
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



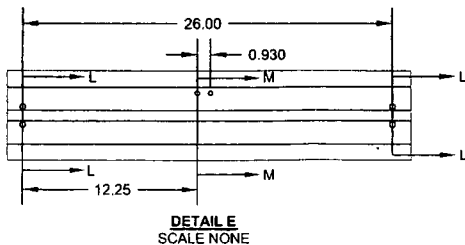
SECTION X-X
SCALE 5X



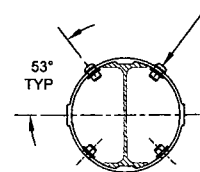
SECTION Y-Y
SCALE 5X

D3391-013 MID TUBE ASSEMBLY PARTS LIST

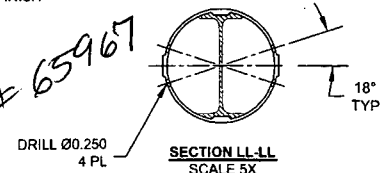
QTY	PART NUMBER	DESCRIPTION
-013		
X	D3391-013	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
4	D3672-3	WASHER
4	D3672-3	WASHER
12	D3681-1	SPACER
24	AELS-1032-130	INSERT
4	ALS4-428-165	INSERT
4	AN960C10L	WASHER
4	AN960C416L	WASHER
4	MS27039C1-09	SCREW
4	MS27039C4-08	SCREW



DETAIL E
SCALE NONE



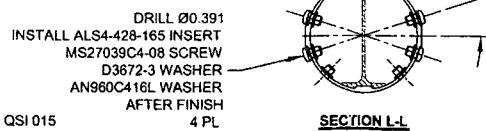
SECTION M-M
SCALE 5X



SECTION LL-LL
SCALE 5X

DEO ATTACHED **RELEASED**

- D3391-013 MID TUBE ASSEMBLY**
- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
 - 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-2411/291 PER QSI 015
 - 3) WELDING: PER DART QSI 004



SECTION L-L
SCALE 5X

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 5 OF 8
APPROVED		TITLE	SCALE
DE APPR.		412 FLOAT SKIDTUBE	NTS
DATE	08.08.20	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC	

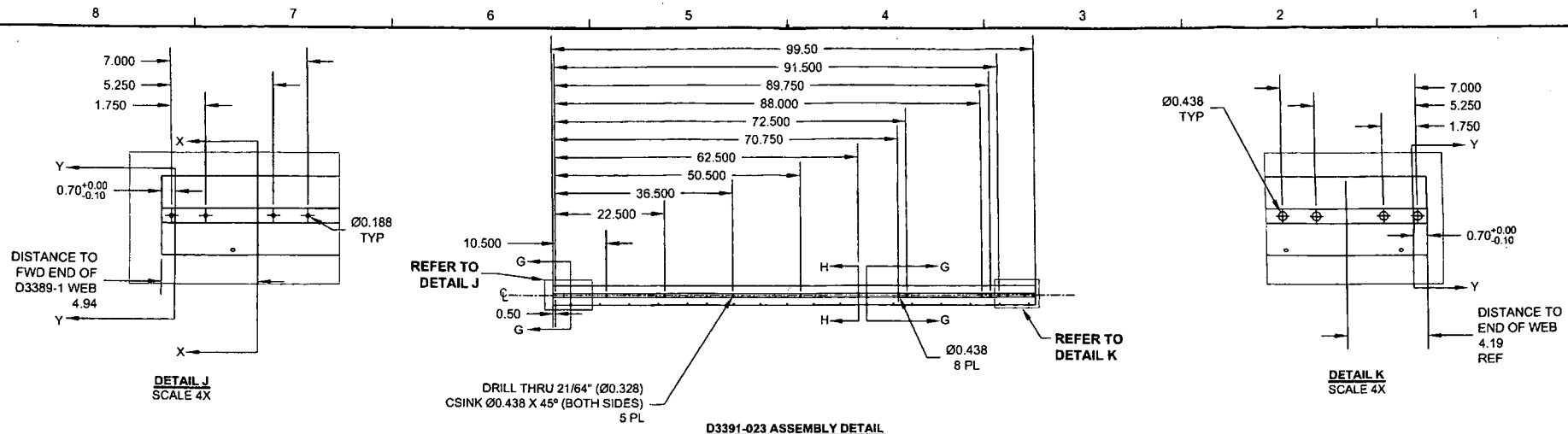
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

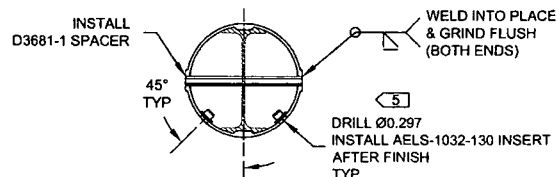
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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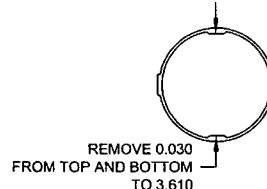
NOTE: Date & initial all entries



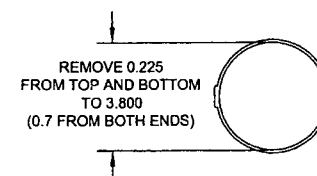
SECTION G-G
SCALE 5X



SECTION H-H
SCALE 5X



SECTION X-X
SCALE 5X



SECTION Y-Y
SCALE 5X

D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT

D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/291 PER QSI 015
- 3) WELDING: PER DART QSI 004

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	AJS	PORT HADLOCK, WA	
CHECKED		DRAWING NO.	REV. H
MFG. APPR.		D3391	SHEET 6 OF 8
APPROVED		TITLE	SCALE
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RELEASED
08-01-05-14

#65967

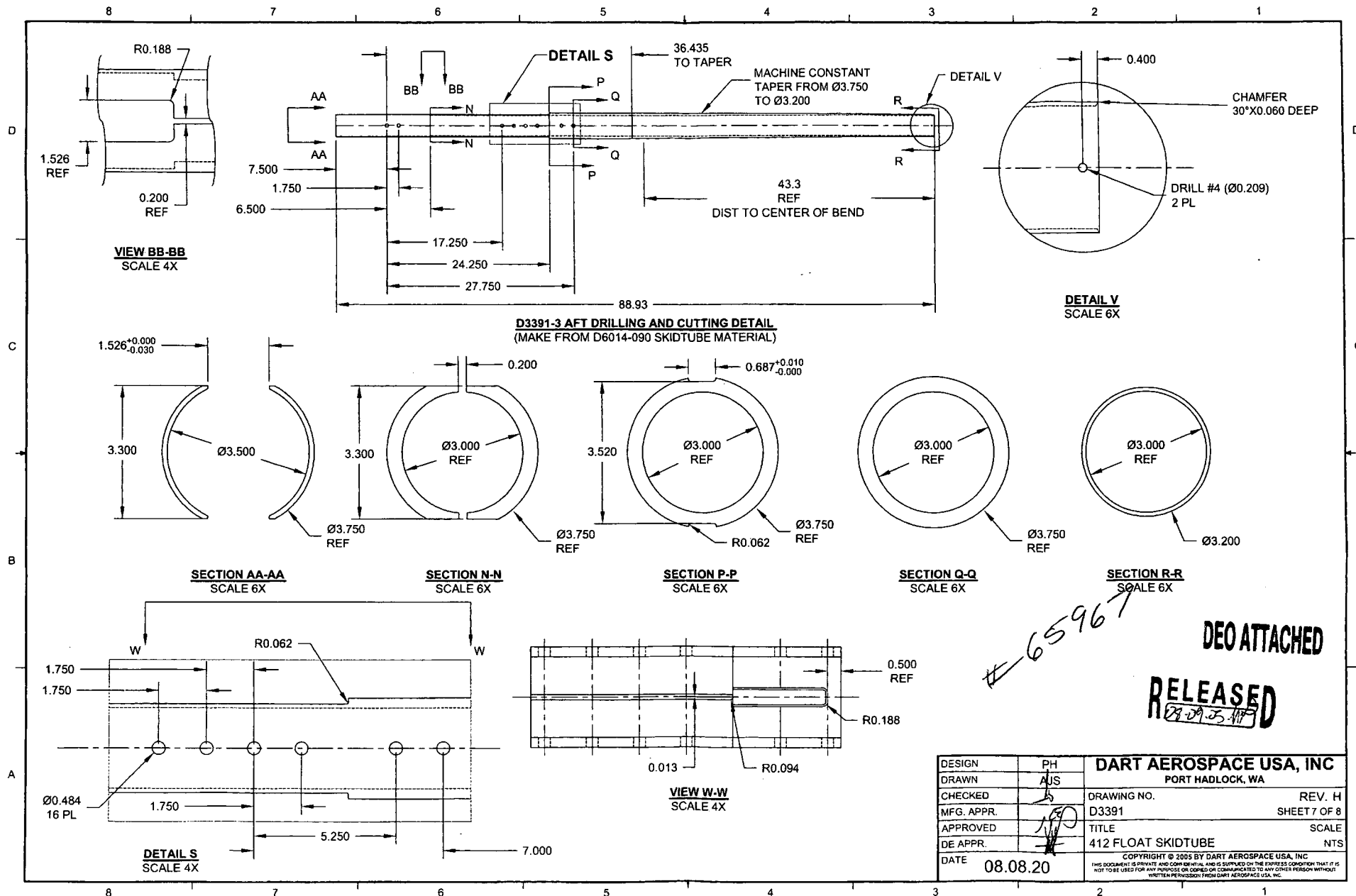
W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DEO ATTACHED

RELEASED
28-09-05-117

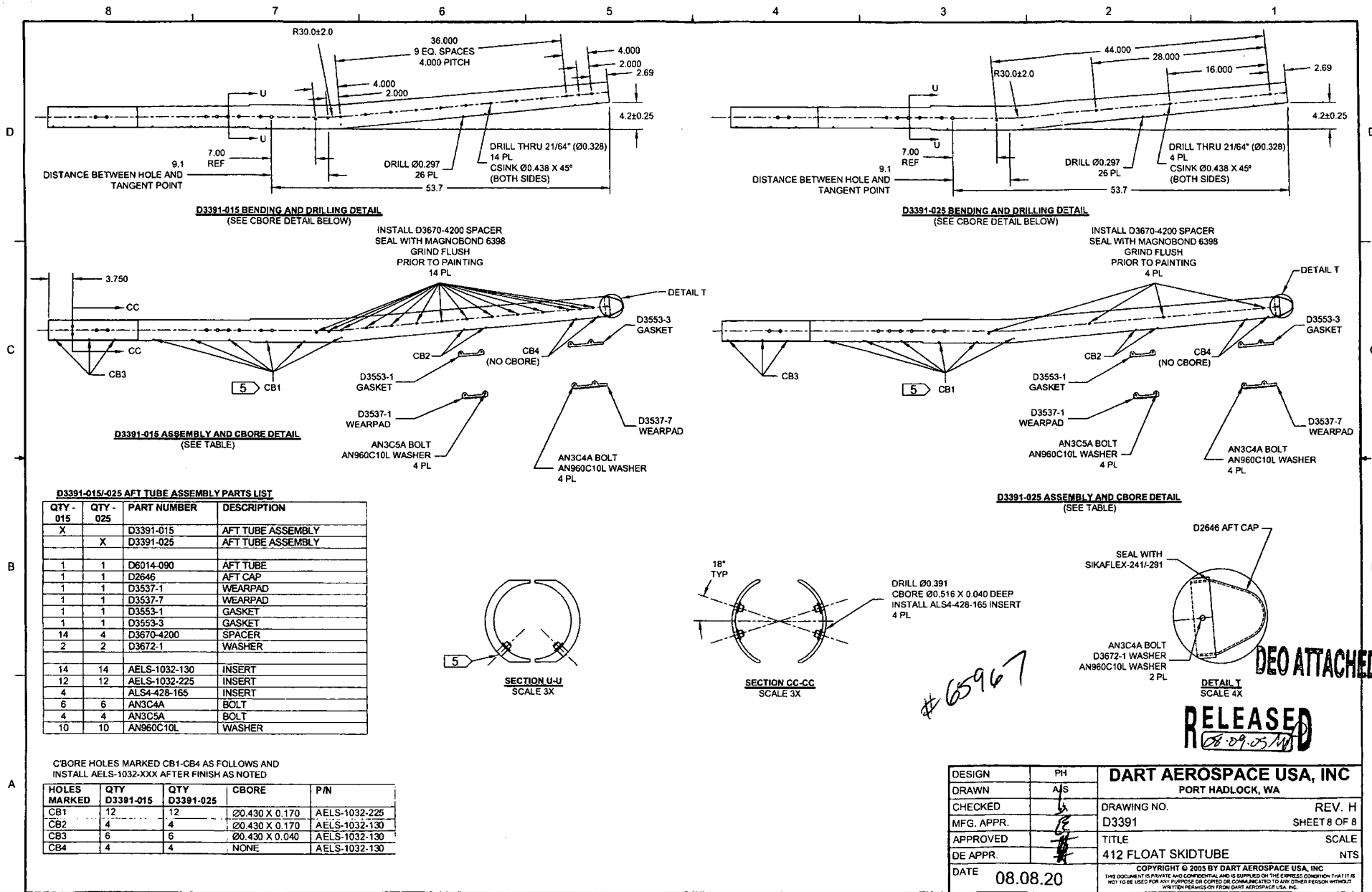
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DRAWING NO. D3391	TITLE 412 FLOAT SKIDTUBE	REV. H	DART AEROSPACE USA, INC ENGINEERING ORDER		D.E.O. NO. D3391-H-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>M</i>	APPROVED <i>MP</i>		DE APPR. <i>MP</i>		
DATE 09.09.23	DATE 06.04.24	DATE 09/09/25	DATE 09/09/30		DATE 09/09/30		

PURPOSE:

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF D3391-041/-043 SKIDTUBES.

CHANGE:

AMEND NOTE 2 OF D3391-041/-043 SKIDTUBE ASSEMBLIES (ZN A6-1, A6-2) AS FOLLOWS:

- 2) ~~SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH~~
~~AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH~~
 LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS
 OFF POWDER COATING WITH MEK DEGREASER.

RELEASED
 2010-02-02
MP

#65967

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NO. 244

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliott
Job number: 65388
Part number: 83391-023
Description: mid tube
Welding Process: Tig[☒] Mig[]
Base material: Aluminum
Current: AC[] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Lat [signature] Date of Test Coupon 11-01-18

Welder Barclay Elliott Date of Test Coupon 11-01-18

The above named individual is qualified in accordance with AWS D17.1.2001 to weld